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REPORT NO. 12

Cotton Fiber and Processing Test Results



Agricultural Marketing Service
U.S. DEPARTMENT OF AGRICULTURE
Memphis, Tenn. 38117 January 19, 1973

This is the twelfth of a series of reports of fiber and processing test results from the 1972 cotton crop. Subsequent reports in this series will follow at approximately two-week intervals during the harvesting season, and will be summarized in a comprehensive report at the end of the season. This series will present data on the same subject as "Summary of Cotton Fiber and Processing Test Results, crop of 1971", April 1972. These reports are published by the Standardization Section, Cotton Division, Agricultural Marketing Service, U. S. Department of Agriculture, P. O. Box 17723, Memphis, TN 38117.

COTTON FIBER AND PROCESSING TEST RESULTS, CROP OF 1972

Discussion of Test Results

Cotton testing laboratories of the Agricultural Marketing Service, USDA, report that fibers from Southwestern short staple samples tested, to date, are longer, coarser and stronger than through the same date last year. Shirley Analyzer nonlint content and picker and card waste are lower. Yarns spun from these samples are stronger and have fewer imperfections than a year ago. Average spinning potential yarn number is higher.

Averages for all medium staple samples tested through January 12 show stronger fiber strength at zero gage than a year ago. Yarns spun from these samples show fewer imperfections.

Medium staple samples tested from the Southeast show stronger fiber strength than a year ago. Picker and card waste is lower. Yarns spun from these are stronger and show lower appearance grades, but fewer imperfections were noted as compared to last year. Average spinning potential yarn number is higher than a year ago.

South Central medium staple samples tested to date are shorter and stronger than a year ago. Yarns spun from these samples show about the same results as last season.

Medium staple samples from the Southwest show about the same fiber test results on samples tested as last season. Yarns spun from these samples have fewer imperfections. Average spinning potential yarn number is higher than last season.

No additional spinning lots were received from the West during this report period.

Averages for all long staple samples tested are stronger than last season. Picker and card waste and comber waste are lower than a year ago. Yarns spun from these samples have lower appearance grades. Average spinning potential yarn number is higher than a year ago.

No additional long staple lots were received from the Southeast, South Central and Western areas during this report period.

Extra long staple, American Upland, samples tested to date show approximately the same fiber test results as through the same comparable period last year. Comber waste is higher than a year ago. Fewer yarn imperfections were noted this season.

Extra long staple, American Pima, samples from the West are finer and weaker than a year ago. Picker and card waste is lower than last season. All other fiber and yarn quality measurements are about the same as last year.

Table 1.--Cotton:

Averages of fiber and processing tests from selected gin points in the United States through January 12, 1973

Staple group Area, and Crop year	Lots tested	Fiber test results						Processing test results					
		Fibrograph		Mike fine- ness		Fiber strength		P & C waste		Yarn quality		Spin. Potent.	
		2.5% span	50/2.5 unif.	Zero gage	1/8" gage	S A nonlint	G/tex	Skein str.	Appearance imperf. ections	Index No.	22s Carded Yarn	Yarn No.	
Short Staple:													
Southwest	49	0.95	45	4.0	79	20	4.4	7.2	85	115	37	38	
1971	44	0.97*	45	4.2	81	21	3.6	6.5	94	117	27	46	
Medium Staple:													
Southeast	67	1.08	45	4.4	79	22	3.4	6.6	99	109	20	61	
1971	60	1.08	45	4.3	83	23	3.0	6.1	104	104	16	66	
South Central	142	1.10	44	4.3	81	22	3.0	5.9	103	112	20	62	
1971	160	1.08	45	4.3	83	23	2.8	6.2	102	109*	19	64	
Southwest	40	1.05	44	4.1	84	22	3.6	6.3	102	116	29	56	
1971	42	1.06	45	4.2	83	22	3.3	6.4	101	118	24	61	
West	60	1.12	45	4.2	92	25	2.7	5.3	121	120	24	70	
1971	60	1.09	45	4.4	90	24	2.6	5.5	110	121	17	66	
U. S. Average													
1971	309	1.09	44	4.3	83	23	3.1	6.0	105	113	22	63	
1972	262	1.08	45	4.3	85	23	2.9	6.0	104	113	19	64	
Significant difference 2/		0.02	2	0.2	2	1	0.5	0.5	4(22s)	5	2	3	

1/ Based on a limited number of samples of modal quality

2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

* Corrected averages

Table 1.-Cotton:

Averages of fiber and processing tests from selected gin points in the United States through January 12, 1973

(Continued)

Staple group, Area, and Crop year	Lots	Fiber Test Results						Processing Test Results						
		Length		Mike Span	Mike Unif	Zero gage	1/8" gage	SA lint	P&C Waste	Comber Waste	Strength		Yarn Quality	
		In.	Pct.								Pct.	Pct.	carded	combed
<u>Long Staple:</u>														
Southeast														
1971	16	1.14	43	4.3	79	22	4.2	9.7	17.2	102	118	109	118	
1972	19	1.12	44	4.3	85	24	3.6	8.5	16.9	107	123	102	117	
South Central														
1971	3	1.22	43	4.5	83	24	5.3	9.6	16.4	113	130	107	117	
1972	4	1.16	44	4.0	88	24	4.2	8.8	16.0	116	131	100	110	
West														
1971	14	1.16	44	3.5	92	26	2.4	8.7	16.9	128	146	96	104	
1972	15	1.17	44	3.6	91	25	2.5	7.2	15.6	126	145	91	100	
U. S. Average														
1971	33	1.16	43	4.0	85	24	3.5	9.3	17.0	114	131	103	112	
1972	38	1.15	44	4.0	88	24	3.4	8.2	16.2	116	133	98	109	
<u>50s Combed Yarn</u>														
<u>American Upland</u>														
<u>Extra Long Staple:</u>														
West														
1971	2	1.41	30	4.0	105	30	2.0	8.2	16.0	66	100	100	10	
1972	2	1.40	32	4.0	104	33	2.4	8.4	16.6	64	100	100	6	
<u>American Pima</u>														
West														
1971	21	1.45	31	3.8	99	33	2.7	8.4	17.6	65	113	113	3	
1972	20	1.44	32	3.6	97	32	2.6	7.8	17.7	4(22s)	113	113	3	
Significant Difference 2/		0.02	2	0.2	2	1	0.5	0.5	0.5	4(22s)	5	5	2	
Difference 2/										2(50s)			3	

1/ Based on a limited number of samples of modal quality
 2/ Minimum differences considered to be significant for comparisons in this table. These guides are based upon averages of a number of lots and are not applicable to individual samples.

Table 2 --Cotton, American upland short staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification & Sample Number		Fiber Test Results								Processing Test Results - Carded Yarns									
		Digital Fibrograph	Mike, 2.5% span	Fiber Strength Zero Gage	Elon- gat'n 1/8"	S.A. Non- lint	Color Raw Stock Gra	P & C Waste	Strength	Elongation	Appearance Index	Imperfect's 8s or 22s or 74 tx 27 tx	8s or 22s or 74 tx 27 tx	8s or 22s or 74 tx 27 tx	Spin. Poten- tial				
No	Grade	Staple span	32s	In	Pct	Rdg	Mpsi	G/tex	Pct	No	Pct	Pct	Lbs	Pct	No	No	No		
SOUTHWEST AREA																			
NORTHWEST TEXAS		ANSON	3 SLM LT SP	42	31	0.99	45	4.0	74	LANKART	611	3.4	3	4	100 PERCENT	91	8.0	6.7	
															7.1	301		120	
																		41	
																		29	
																		44.	
COTTON CENTER		2 LM SP	531/32	0.97	46	2.9	74	STRIPPER	31	6.3	4	5	80 PERCENT	96	8.4	7.7	100	90	
															9.6	324		94	
																		50	
																		40	
PADUCAH		2 SLM LT SP	42	33	1.07	44	4.3	79	LANKART	57	3.0	4	4	90 PERCENT	94	7.9	6.2	120	120
																		36	
																		21	
																		52	
WESTERN AREA																			
NEW MEXICO		CAUSEY	2 SLM TG	44	30	0.92	47	2.7	79	CREGG	35	6.6	6	8	90 PERCENT	103	7.9	6.7	
															10.1	335		120	
																		95	
																		51	
																		44.	
																		6	

1/ Reduced from 43 because of bark

Table 3 --Cotton, American upland medium staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification & Sample Number		Fiber Test Results								Processing Test Results - Carded Yarns										
		Digital Fibrograph		Fiber Strength		Elongat'n 1/8"		S.A. Non-Lint		Color Raw Stock		P & C Waste		Elongation		Appearance Index		Imperfect's		
No	Grade	Staple span	2.5% Unif.	Mike	Zero 1/8" Gage	Gage	Pct	No	Raw Stock	Gra	Yel	22s or 50s or 27 tx	No	No	No	No	Spin. Potential			
32s	In	Pct	Reg	Msi	G/tex		Pct	No	Pct	Pct	Pct	Lbs	Lbs	Pct	Pct	No	No	No	No	
SOUTHEASTERN AREA																				
ALABAMA	TYLER	51	35	1.10	43	4.02	80	COKER 201	2.7	2	6.2	104	35	6.3	4.8	120	80	15	8	62
4 LM																				
SOUTH CENTRAL AREA																				
ARKANSAS	WILSON	71 ^{1/2}	31	0.97	45	4.07	90	QUAPAW	21	4.1	4.02	7	3	8.1	93	27	4.7	2.8	120	90
2 GO																				20
TENNESSEE																				
FAYETTEVILLE	51	33	1.00	43	4.01	76	HANCOCK	20	6.5	2.1	3	3	70 PERCENT	87	29	5.6	4.4	90	70	22
4 LM																				14
SOUTHWEST AREA																				
NORTHWEST TEXAS	LUBBOCK	41	34	1.12	40	3.4	77	COKER 312	22	7.2	3.8	2	3	6.0	102	39	6.8	5.1	110	80
1 SLM																				39
RAYLAND	42	32	1.06	44	4.5	85	LOCKETT 4789-A	23	5.9	3.8	3	4	6.5	104	38	5.6	4.3	120	90	20
2 SLM LT SP																				17
ROPSVILLE	42	32	1.05	41	2.8	75	LOCKETT 4789-A	22	7.9	3.1	2	3	7.7	98	38	7.4	5.6	100	70	46
2 SLM LT SP																				37

* 100 percent selected for tests, less than 100 percent in the area

1/ Reduced from '61 because of bark

Table 4-Cotton, American upland extra long staple: Quality characteristics by production areas, crop of 1972

Table 5 --Cotton, American Pima extra long staple: Quality characteristics by production areas, crop of 1972

Production Area, Classification		Fiber Test Results										Processing Test Results - Combed Yarns											
		Array Length		Fiber Strength		Elong- at'n 1/8"		S.A.		Color		Comber Waste		Strength		Elongation		Appearance Index		Imperfect'ns			
No	Grade	Sample Number	Staple	UQL	CV	Mike	Zero Gage	1/8" Gage	Non- Lint	Gra	Yel	Raw Stock	P & C Waste	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	50s or 12 tx	80s or 7 tx	No.	No.
			32s	In	Pct	Rdg	MoSi	G/tex	Pct	Pct	Pct	No	No	Pct	Pct	Lbs	Lbs	Pct	Pct	No.	No.		
WESTERN AREA																							
ARIZONA																							
SAFFORD	5	44	1.46	34	3.6	91	31	7.3	2.3	4	5	8.5	17.8	63	35	5.1	4.8	110	120	4	2		
WENDEN	3	44	1.50	34	3.9	94	32	7.3	2.4	4	4	7.0	16.2	62	35	5.5	4.7	120	120	2	1		
NEW MEXICO																							
COLUMBUS	3	44	1.42	33	3.3	93	31	8.0	2.9	3	6	7.8	15.2	62	35	5.5	4.9	120	120	2	1		
WEST TEXAS																							
EL PASO	4	44	1.35	38	2.8	91	30	7.4	3.2	5	6	8.8	18.1	63	35	5.3	4.7	90	90	5	5		

